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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,818	03/04/2004	Sean Chang	0941-0927P	3664

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BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER
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JOHNSON, MATTHEW A

ART UNIT	PAPER NUMBER
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3682

NOTIFICATION DATE	DELIVERY MODE
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07/17/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

**Office Action Summary**

Application No.

10/791,818

Applicant(s)

CHANG, SEAN

Examiner

Matthew Johnson

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 1-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 3/04/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group II, claims 8-23 in the reply filed on 5/07/2007 is acknowledged. The traversal is on the ground(s) that it would not be a burden to the examiner to examine all claims in the application. This is not found persuasive because Group I claims 1-7, disclose a method of manufacturing an anti-vibration disk classified in class 29 subclass 264, while Group II claims 8-23, are drawn to an anti-vibration apparatus classified in class 74 subclass 573R. Due to their separate classification, a different field of search would be required, resulting in a burdensome search (See MPEP 808.02 [R-5]). The restriction requirement is still deemed proper and is therefore made FINAL. Upon further consideration, the requirement for an election of species between Species I: Figures 2A-2C, 3A-3D, 4A-4C and 5, and Species II: Figures 6A and 6B, is hereby withdrawn. The examiner will examine claims 8-23 in the instant application, with claims 1-7 withdrawn from consideration as being drawn to a non-elected invention.

### ***Claim Objections***

2. Claim 16 is objected to because of the following informalities: in line 7, it appears that the phrase "a holder formed on inner periphery" should read --a holder formed on an inner periphery--. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8-15, are rejected under 35 U.S.C. 103(a) as being unpatentable over Han (USP-6,731,588) in view of Hung (USP-6,747,803).

Re clms 8: Han discloses an anti-vibration apparatus applied in a rotating disk of an image display system for eliminating unbalance of the rotating disk, comprising a(n):

- Motor (100)
- Spindle (130) housed in the motor and coupled to a rotating disk (1)
- Holder (200) formed on the rotating disk
- Fluid (272) contained in the holder
- Predetermined amount of spheres (271) placed in the holder (C11 L9-13, C16 L47-57)

While Han does indeed disclose a fluid and a predetermined amount of spheres contained in the holder, he does not disclose a curable fluid.

Hung teaches curable fluid (UV glue) contained in the holder that is cured to achieve a permanent balance of the rotating disk (12).

It would have been obvious to one having ordinary skill in the art at the time of the invention to have substituted the fluid in the device of Han with a curable fluid, as taught by Hung, for the purpose of achieving a permanent balance of the rotating disk.

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Re clms 9 and 10: Han discloses that the holder (200) is formed by an annular element or a bowl (210) bonded to the disk by means of coupling (220,222,223; C9 L31-38).

Re clm 11: Hung further discloses a thermal sensitive curable fluid (UV glue).

Re clm 12: Han discloses that the holder (200) has a flange (See Fig. 15) located on a top end of a side wall (210) thereof and extended inwards.

Re clm 13: Han discloses that the holder (200) and the rotating disk (1) are coaxial (See Fig. 2).

Re clm 14: Han discloses that the spheres (271) are made of metal (C10 L23-33).

Re clm 15: Han discloses that the spheres (271) are made of a metalloid (C7 L41-59 and C9 L59-63).

5. Claims 8-14 and 16-22, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hung (USP-6,747,803) in view of Goodrich et al. (USP-3,696,688).

Re clm 8: Hung discloses an anti-vibration apparatus applied in a rotating disk of an image display system for eliminating unbalance of the rotating disk, comprising a(n):

- Motor (2)
- Spindle (C2 L4-6) housed in the motor and coupled to a rotating disk (12)
- Holder (11) formed on the rotating disk
- Curable fluid (UV glue) contained in the holder

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While Hung does indeed disclose that the curable fluid flows to the periphery side of the holder under a vibration force and is distributed in such a way to balance the disk, he does not disclose a predetermined amount of spheres placed in the holder.

Goodrich teaches an anti-vibration apparatus for eliminating vibration of a rotating disk resulting from unbalance comprising a predetermined amount of spheres (20) placed in a holder (17) formed on a rotating disk (10) for the purpose of providing a better damping device which can reduce vibrations cause by a higher amplitude of vibration during a higher rotational speed.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to add a predetermined amount of spheres into the curable fluid of Hung for the purpose of providing a better damping device which can reduce vibrations cause by a higher amplitude of vibration during a higher rotational speed.

Re clms 9 and 10: Hung further discloses that the holder (11) is formed by an annular element bonded by means of adhering and coupling to the disk (12).

Re clm 11: Hung further discloses a thermal sensitive curable fluid (UV glue).

Re clm 12: Hung further discloses that the holder has a flange located on a top end of the side wall thereof and extended inwards (C2 L39-40, square groove 116).

Re clm 13: Hung further discloses that the holder (11) and the rotating disk (12) are coaxial.

Re clm 14: Goodrich further discloses that the spheres (20) are made of metal (C1 L55).

Re clm 16: Hung discloses a color wheel module (1) applied in an image display system for modulating the color of an incident light comprising a(n):

- Motor (2)
- Disk-shaped color filter (12) with a plurality of thin film color filters (12a-12d)
- Holder (11) formed on an inner periphery of the disk-shaped color filter disk
- Curable fluid (UV glue) contained in the holder

While Hung does indeed disclose that the curable fluid flows to the periphery side of the holder under a vibration force and is distributed in such a way to balance the disk, he does not disclose a predetermined amount of spheres placed in the holder.

Goodrich teaches an anti-vibration apparatus for eliminating vibration of a rotating disk resulting from unbalance comprising a predetermined amount of spheres (20) placed in a holder (17) formed on a rotating disk (10) for the purpose of providing a better damping device which can reduce vibrations cause by a higher amplitude of vibration during a higher rotational speed.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to add a predetermined amount of spheres into the curable fluid of Hung for the purpose of providing a better damping device which can reduce vibrations cause by a higher amplitude of vibration during a higher rotational speed.

Re clms 17 and 18: Hung further discloses that the holder (11) is formed by an annular element bonded by means of adhering and coupling to the disk (12).

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Re clm 19: Hung further discloses a thermal sensitive curable fluid (UV glue).

Re clm 20: Hung further discloses that the holder has a flange located on a top end of the side wall thereof and extended inwards (C2 L39-40, square groove 116).

Re clm 21: Hung further discloses that the holder (11) and the rotating disk (12) are coaxial.

Re clm 22: Goodrich further discloses that the spheres (20) are made of metal (C1 L55).

6. Claims 15 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hung (USP-6,747,803) in view of Goodrich et al. (USP-3,696,688) further in view of Han (USP-6,731,588).

Re clms 15 and 23: Hung in view of Goodrich discloses all of the claim limitations as described above.

Hung does not disclose that the spheres are made of metalloid.

Han teaches an anti-vibration apparatus for a rotating disk comprising spheres (271,430-1) that are made of metalloid (C7 L41-59 and C9 L59-63) for the purpose of providing rigid bodies made of a non-magnetic material so that the rigid bodies are not influenced by an external magnetic field (C7 L35-40).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have formed the spheres of Goodrich out of a metalloid, as taught by Han, for the purpose of providing rigid bodies made of a non-magnetic material so that the rigid bodies are not influenced by an external magnetic field (C7 L35-40).



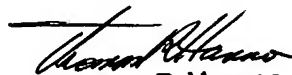
**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew Johnson whose telephone number is 571-272-7944. The examiner can normally be reached on Monday - Friday 8:30a.m. - 5:00p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJ  
MJ 7/7/2007

  
Thomas R. Harmon  
Primary Examiner